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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,030	03/26/2001	Yuji Iguchi	010148	3374
23850	7590	01/14/2004		
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			EXAMINER SHEWAREGED, BETELHEM	
			ART UNIT 1774	PAPER NUMBER

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

ed11

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/806,030	IGUCHI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Betelhem Shewareged	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-13 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,6,7,9 and 10 is/are rejected.
- 7) ☒ Claim(s) 4,5,8,11 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Applicant's response filed on 10/20/2003 has been fully considered. The claim objection has been withdrawn in view of Applicant's amendments.
2. Claims 3, 4 and 6 are amended, claim 13 is added, and thus claims 1 and 3-13 are pending. (NOTE: Claim 12 is still withdrawn from consideration as non-elected invention).

### ***Claim Rejections - 35 USC § 103***

3. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai et al. (US 6,326,055) in view of Mukoyoshi et al. (US 6,242,082 B1).

Arai discloses an image receiving sheet comprising a base and a receiving layer (col. 7, line 2). The receiving layer is made of a coating composition containing a resin such as polyurethane, polyvinyl alcohol or polyvinyl acetate (col. 7, line 21), a filler or colorant such as zinc sulfide, silica, talc or alumina (col. 8, line 22). The receiving layer is equivalent to the claimed ink receiving layer. Arai receiving layer has an arithmetic mean surface roughness value of 0.1-4.0 measured in accordance with JIS B 0601 (col. 11, lines 1-5). The above roughness value is within the claimed range. The base may be a paper made of cellulose fiber (col. 11, line 25). In view of the specification of the current application, the claimed fabric support may be made of natural fibers. Cellulose fiber is a natural fiber, therefore, the claimed fabric support reads on the base paper made of cellulose fiber of Arai. With respect to surface glossiness value of the ink

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receiving layer, it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re swinehart et al.*, 169 USPQ 226 at 229. Since the Arai reference teaches all of Applicant's claimed compositional and positional limitations, it is inherent that the reference article functions in the same manner claimed by Applicant. The burden is upon Applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

Arai fails to disclose a base impregnated with a pigment component.

Mukoyoshi teaches an ink jet recording sheet having a support paper sheet and at least one ink receiving layer on the support paper sheet (abstract). The support paper sheet comprises pigments or fillers (col. 5, line 9).

Arai and Mukoyoshi are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the pigments or fillers of Mukoyoshi with the base material of Arai for the purpose of imparting an opaqueness, preventing the permeation of the ink to the back surface of the recording sheet and enhancing the ink absorbing property of the base.

4. Claims 6, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai et al. (US 6,326,055) in view of Mukoyoshi et al. (US 6,242,082 B1), DeMatte et al. (US 5,985,424) and Aerosil/Degussa Website.

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Arai discloses an image receiving sheet comprising a base and a receiving layer (col. 7, line 2). The receiving layer is made of a coating composition containing a resin such as polyurethane, polyvinyl alcohol or polyvinyl acetate (col. 7, line 21), a filler or colorant such as zinc sulfide, silica, talc or alumina (col. 8, line 22). The receiving layer is equivalent to the claimed ink receiving layer. Arai receiving layer has an arithmetic mean surface roughness value of 0.1-4.0 measured in accordance with JIS B 0601 (col. 11, lines 1-5). The above roughness value is within the claimed range. The base may be a paper made of cellulose fiber (col. 11, line 25). In view of the specification of the current application, the claimed fabric support may be made of natural fibers. Cellulose fiber is a natural fiber, therefore, the claimed fabric support reads on the base paper made of cellulose fiber of Arai. With respect to surface glossiness value of the ink receiving layer, it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re Swinehart et al.*, 169 USPQ 226 at 229. Since the Arai reference teaches all of Applicant's claimed compositional and positional limitations, it is inherent that the reference article functions in the same manner claimed by Applicant. The burden is upon Applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

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Arai fails to disclose a base impregnated with a pigment component.

Mukoyoshi teaches an ink jet recording sheet having a support paper sheet and at least one ink receiving layer on the support paper sheet (abstract). The support paper sheet comprises pigments or fillers (col. 5, line 9).

Arai and Mukoyoshi are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the pigments or fillers of Mukoyoshi with the base material of Arai for the purpose of imparting an opaqueness, preventing the permeation of the ink to the back surface of the recording sheet and enhancing the ink absorbing property of the base.

Arai does not disclose a gas phase method or fumed silica having the claimed particle size and BET surface area.

DeMatte teaches an ink jet recording layer comprising a basestock, a base coat having pigments (col. 3, line 15), and an ink receiving layer in the order thereof (col. 2, line 54). The claimed pigment layer is equivalent to the base coat layer. The ink receiving layer contains a binder and a fumed silica having a BET surface area of 140-200 m<sup>2</sup>/g and a particle size of 15 nm (see AEROSIL datasheet).

Arai and DeMatte are analogous arts because they are from the same field of endeavor that is the ink jet recording medium art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the fumed silica of DeMatte with the ink jet recording sheet of Arai so as to control the ink absorption of the receiving layer.

***Response to Arguments***

5. Applicant's argument is based on that the image receiving sheet of Arai is produced by dry coating followed by melting as opposed to the claimed invention which is produced by wet coating. The argument is not persuasive because the claimed invention is directed to an article, not process of making an article, furthermore, none of the elected claims recited method of making the claimed ink jet recording sheet. Since the combination of Arai, Mukoyoshi, DeMatte and Aerosil/Degussa Website teaches every element of the claimed invention, the method of making the claimed ink jet recording sheet is not germane to the issue of the patentability of the ink jet recording sheet itself.

Applicant further argues that Arai is not concerned with large unevenness, and a glossy feeling or a stereoscopic feeling expressed by unevenness is not disclosed or suggested by Arai. This argument has not been found persuasive because the receiving layer of Arai has an arithmetic mean surface roughness value of 0.1-4.0, which is within the claimed range. The claimed arithmetic mean surface roughness value is not more than 30, and not more than 30 includes the roughness value of Arai, which is 0.1-4.0. Furthermore, the Examiner combined the invention of Arai with DeMatte to teach the use of fumed silica. Thus the claimed invention reads on the combination of the disclosed prior arts.

Applicant also argues that a stereoscopic feeling is attained by utilizing unevenness, and such technical concept is entirely irrelevant to the invention of Arai wherein the unevenness or undulation of the surface is offset or compensated. This

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argument is not persuasive because Arai never teaches a smooth surface, it still teaches a rough surface with a roughness value of 0.1-4.0 which is within the claimed range of surface roughness of not more than 30.

***Allowable Subject Matter***

6. Claims 4, 5, 8, 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The closest art Arai neither teaches nor suggests a base material made of a woven fabric having yarn with a diameter of not less than 200 um or 100-1,000 um.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Thur. 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



Betelhem Shewareged  
January 9, 2004.